



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/781,624      | 02/20/2004  | Katsuya Kase         | 8009.0010           | 4112             |

22852 7590 03/27/2007  
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
LLP  
901 NEW YORK AVENUE, NW  
WASHINGTON, DC 20001-4413

EXAMINER

ONEILL, KARIE AMBER

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1745

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 03/27/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                 |              |  |
|------------------------------|-----------------|--------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s) |  |
|                              | 10/781,624      | KASE ET AL.  |  |
|                              | Examiner        | Art Unit     |  |
|                              | Karie O'Neill   | 1745         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on January 3, 2007.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The Applicant's amendment filed on January 3, 2007, was received. Claims 1-3 were amended.

2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on July 6, 2006.

### ***Claim Objections***

3. The Claim objections with regard to Claims 1 and 3 are withdrawn, because the claims have been amended.

### ***Claim Rejections - 35 USC § 112***

4. The Claim rejection under 35 U.S.C. 112, second paragraph, with regard to Claim 2 is withdrawn, because the claim has been amended.

### ***Claim Rejections - 35 USC § 102/103***

5. Claims 1-3 are rejected under 35 U.S.C. 102 (b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Inoue et al. (JP 2000-021402).

Inoue et al. disclose a nonaqueous electrolyte rechargeable secondary battery including an active material for a positive electrode, together with a negative electrode, a separator and a lithium salt containing nonaqueous electrolyte, and containing a

Art Unit: 1745

sulfate radical preferably formed of an inorganic or organic sulfate of 0.01 to 5 weight % to the positive electrode material (see abstract). Inoue et al. disclose in paragraph 0021, a general formula for the positive active material:  $\text{Li}_x\text{Ni}_y\text{Co}_{1-y-z}\text{M}_z\text{O}_2$ , where M is at least one metal selected from Al, Mn, Ti, Fe, and Zn, and  $0.1 \leq x \leq 1.05$ ,  $0 \leq y \leq 0.9$  and  $0 \leq z \leq 0.2$ . However, it is the position of the examiner that other properties of said active material for a positive electrode of a nonaqueous electrolyte secondary battery, such as the occupancy rate of lithium found from the X-ray diffraction chart and using Rietveld analysis being 98% or greater, the carbon amount measured by way of the high frequency heating-infrared absorption method being 0.12 wt% or less, and a Karl Fischer moisture content of 0.2 wt% or less when heated to 180°C, are inherent, given that the active material for a positive electrode disclosed by Inoue et al. and the instant application have similar material properties. A reference that is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. Inherency is not established by probabilities or possibilities. *In re Robertson*, 49 USPQ2d 1949 (1999).

Alternatively, it would have been within the skill of the ordinary artisan to mix the raw materials of the active material at high temperatures, as disclosed by Inoue et al., because temperature affects the lattice parameters and crystalline structure of the positive electrode active material, which in turn affect the occupancy rate of lithium and the weight % of carbon present in the active material.

***Response to Arguments***

6. Applicant's arguments filed January 3, 2006, have been fully considered but they are not persuasive.

7. *Applicant's principal arguments are:*

*(a) Inoue et al. produces a lithium oxide composite in a significantly different manner from that of the claimed invention and there is no basis in fact to support that Inoue et al. possesses the claimed lithium site occupancy rate.*

In response to Applicant's arguments, please consider the following comments:

(a) Inoue et al. disclose a positive active material formed from the same starting materials, including nickel or cobalt sulfate in the same weight % range as the claimed invention (paragraph 0027), wherein the starting materials are mixed either by dry blending or wet blending (paragraph 0030) and synthesized by coprecipitation (paragraph 0033) as in the claimed invention, as well as heated to a desirable temperature of 700 to 1000 degrees C, more preferably 600 to 1100 degrees C (paragraph 0034), which also falls within the range of which the claimed invention positive active materials are heated. The high temperature range at which the mixture is heated would be hot enough to drive off most of the carbon and water present in the mixture, resulting in the active material containing 0.12 weight % or less of carbon as measured by the high frequency heating-infrared absorption method and 0.2 weight% or less of the Karl Fischer water content due to heating at 180 degrees C. Given that the active material for a positive electrode disclosed by Inoue et al. and the instant application have the same material properties and

Art Unit: 1745

particle size, it is the position of the examiner that other properties of said active material for a positive electrode of a nonaqueous electrolyte secondary battery, such as the occupancy rate of lithium found from the X-ray diffraction chart and using Rietveld analysis being 98% or greater, would be necessarily present.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571) 272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karie O'Neill  
Examiner  
Art Unit 1745

KAO

  
DAH-WEIYUAN  
PRIMARY EXAMINER